

## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.

Application Serial Number: 10/729,802  
Source: 1/FWO  
Date Processed by STIC: 10/22/04

# ***ENTERED***



IFWO

## RAW SEQUENCE LISTING

DATE: 10/22/2004

PATENT APPLICATION: US/10/729,802

TIME: 15:42:31

Input Set : A:\Seq List.txt

Output Set: N:\CRF4\10222004\J729802.raw

```

3 <110> APPLICANT: Julien, Bryan
4   Reid, Ralph C.
6 <120> TITLE OF INVENTION: Disorazole Polyketide Synthase Encoding Polynucleotides
8 <130> FILE REFERENCE: 020547-003560US
10 <140> CURRENT APPLICATION NUMBER: US 10/729,802
11 <141> CURRENT FILING DATE: 2003-12-05
13 <150> PRIOR APPLICATION NUMBER: US 60/512,892
14 <151> PRIOR FILING DATE: 2003-10-20
16 <150> PRIOR APPLICATION NUMBER: US 60/484,934
17 <151> PRIOR FILING DATE: 2003-07-02
19 <150> PRIOR APPLICATION NUMBER: US 60/473,311
20 <151> PRIOR FILING DATE: 2003-05-22
22 <150> PRIOR APPLICATION NUMBER: US 60/465,038
23 <151> PRIOR FILING DATE: 2003-04-23
25 <150> PRIOR APPLICATION NUMBER: US 60/455,521
26 <151> PRIOR FILING DATE: 2003-03-17
28 <150> PRIOR APPLICATION NUMBER: US 60/431,272
29 <151> PRIOR FILING DATE: 2002-12-06
31 <160> NUMBER OF SEQ ID NOS: 9
33 <170> SOFTWARE: PatentIn version 3.3
35 <210> SEQ ID NO: 1
36 <211> LENGTH: 77294
37 <212> TYPE: DNA
38 <213> ORGANISM: Sorangium cellulosum
40 <400> SEQUENCE: 1
41 tgggtatccc gagcgcgtgg cgccgttccc acaaggcctt gcggtgatg ccgagccgac      60
43 gggcaatctc ggtctccgtc agctcgtcct ggtgctccag cacgaagcgg cggaaatagc      120
45 cctcgagcga gtccgaaggc ggcgccccgt cgcgcagcga tgcggaggag acgggcggag      180
47 gcggccgcgg cgggtcgtcg agcccgaggt gggccctctc gatcgcgctg cccccggcga      240
49 gcaccacggc gcggtgaacg gcgttctcca gctcccggac gttgcccggc cacggcgccg      300
51 ccgcgatggc cgcgcgcgcc tccgccgaca gcgcgagcgg cgctgcccc atcaccgcgc      360
53 tccgtcgctt cagcagcgac tcggcgatgc gcaccgcgtc cccgggcccgc tcccgcagcg      420
55 gcggcagccg gatctccagc accgcgagcc ggaaatacag gtcgctccgg aagctcccct      480
57 cgcgacccat cgccccgaga tcccggtgcg tcgcgcgatg cagccgcacg tccgcccgcc      540
59 gggcgcgcggt cgacccacc cgccgcactt cgcccgtctg caaaaaacgc agcaggcgcc      600
61 cctgcacctt catcggcagc tcgccgacct cgtcgagcag cagcgtcccc ccctccgcgc      660
63 cctcgcacag ccccgccccg gccgcgagcg cgcccgcggc cgcgccggcc tcgtaccgca      720
65 acagctcgcc ctcgatctgc gcatcgggga tcgcgcgcga ctgcacgagc acgaacggct      780
67 gctgcccggc cgggctcagc ggtgacccg cgcgcgccag cgtctccttg cccgtgcccc      840
69 cctcgccccc caccagcagc gtcgctcgc tcggcgccac cttgcgacc tcgcggaaca      900
71 cctctcgcat cgccgcagag ccgcccacca tccccctcag ctcgctcgcc tcgggcgcgc      960
73 gcggcgcggg cggcgcggcc agaggcgcg gcggcgcggc ctcggggcgc acgtggcgca      1020
75 ggtggcgctc gacaagcgcg acgagctcgt cgtgatcgaa cggcttcgag aggtaatccg      1080

```

## RAW SEQUENCE LISTING

DATE: 10/22/2004

PATENT APPLICATION: US/10/729,802

TIME: 15:42:31

Input Set : A:\Seq List.txt

Output Set: N:\CRF4\10222004\J729802.raw

```

77 ccgcgccccg cttcacggcc tccaccgcgc ccttcacggt cgcatagctc gtcacagca 1140
79 ccaccggcgc gctcccgcac cgcgccacga gctccgtccc cggcgcgccg ggcaagcgca 1200
81 cgtccgcag caccagatcg aacgcgcaga gctcgtgctc cgcctccgcc tcggcgatcg 1260
83 accccgcctc gacgacggcg tgcccggtggc gcgccaagag ccgcgcgagc tccgcacgga 1320
85 tgacgatctc gtctctcgatc agcaggatcc ggctcatgct tccacctcgc gcccgcgccg 1380
87 cgccccgggc tcgcccgcga gcgggagccg caccgatcacc gtcgtccctt gccccaccgc 1440
89 gctccgcagc gccagcgcg cgcctgtgac ctcgatgacg gagcgcgaga gcggcaggcc 1500
91 gagcccggtg ccgctcgggg cgcgcttcgt gggtcacgaac gggtccagca ccgcggagag 1560
93 gagtcctcgc gggatgcccgc tgccgtggtc ctcgacctcg acgacgatct ggcccgctc 1620
95 gatccaccgc cggacggcga cggtcgcgcc gggctcggac gcgtcgcggg cgttcgcgag 1680
97 caggttcacg aagacctgca cgagctcgcg ccggtcgccg atgacaacga gcgactccgg 1740
99 gcagtgtcgc tccaccgcga cgtgcggggc cgtgcgggtc agccggatca gccgatccgc 1800
101 ctcgccacc acctcggcga gcgacacgc accgaccgc gcgcgcggga tctcgccggg 1860
103 cgacggcacg gcgcgggtgc ggctgtgac gagcagcgac cggaggatcg cctcgatgcg 1920
105 cgcggtctcg ccgaggatga ggcccgccc cgcgcggatc tcgtcgctgt cggcctcggc 1980
107 ccggaggttc tgcgcgaggc agcgatgcc ggtgagcggg ttgccgacct cgtgggccac 2040
109 gcccgcgcg agccgcccga tctggccag gcggtcgcg tggcgagct gcgcctcgag 2100
111 cgcgcgctgc tcggtgcgat cctccacgag caggaccacg ccgcccagg cggcccgcg 2160
113 gtcgagcgga tcgagcgcg ccggtgcac gcgcaggagg cgcgcccgcc cggccacgag 2220
115 cacctcgatc tctcgggcgc cgcgcggc gcgcgccg gaggcgcgc gggcgcgcg 2280
117 gcggaacagc tccgcgaacg ggcccgcgag ccggtcgagc ggcccccga cgaggtcgcg 2340
119 ctctcgcg ccgacgagc cctcgaggcg ccggttgacg aggtgatcg cgcgctcgga 2400
121 gccacggcg cagaccccga gaggagctg cgcgagcacc gagcgagcc accgcgcag 2460
123 gagatcgagc tccctcgccg cgcgacgag ccgctctcg ccgcgcgga ggcgcgctc 2520
125 cagccaccgc agctcctcgg tgagcgcgcc ggacgcgcgc ccgacgcga ccggcgcgct 2580
127 cgcctccgcc tccgcgcgc tctcgcgag caccgggccc accagcgcg acaggttgcg 2640
129 gtgcagcgc tctgcagcg cgtggagctc ggtgggccc gtctcgctcg gcgagatgtc 2700
131 gagctcgatc cgggcgcgcg tgacctcgat cgcggccgcc tcgcgccga gcagccgcgc 2760
133 gagcctgtcc tccagcgcg ccacgctcga cgcacgggtc gcgcgctcca ccgaggggccc 2820
135 gatctcgcg cgcgtgcaca ggcgggccc ctcgcgctcc tccctggccg gcgggcgcag 2880
137 cagcgagacg atcccagcg tcgcgccgtt gacggcgagc gacacgaac tcgggagcga 2940
139 ccacgggtcg atgggcgcgc cgcgcgcgc cgcgcgcgc ccccgcgca ggagcgcgag 3000
141 ccacgccgga tcgatcccgc gcacgcccgc caggagcggc gcgaggcagg tggccgtcca 3060
143 ggtcgcgatg ccggcgagga gcccgcccat gaaccccgcg cgcgtggcg gctcccagaa 3120
145 gagcgcgcg agcaggccc ggaggaaact cgcgaaggcg acgaacgaca cgatgccgct 3180
147 ctcgacgagc agcccggtgt gcggtcgcg gcggtggaag agccaccgc cgacgaggat 3240
149 ggccgcgagg agcagcgccc ggagccacag cagcgcgcg tacacgttgc ggcgcagcgt 3300
151 ccgcgcgcgc agcggcagga gcaggtgcgt cgcgctgtcg ttcgcgagg gcagggccgt 3360
153 gaccatggcc atggcgctcg ccgcgagat gccgcgatg aacgcggcg gcgcgagcca 3420
155 gcgtggccg agcagctgc gcacgagcag cacgtagctg tcggcggggt cggccggggc 3480
157 gagcgcgctc ccggcccaga ggacgggcag gacgggcagg ttgagcgga gcaggaacag 3540
159 ggggaacgcc cagcccgccc tggcgagcgc gcggtcccc gcgcgctgg cgaacgccat 3600
161 gtgccaactgc cgcggcagca ggaaggccc ggcgaagctg atgacgagc tcgaggtcca 3660
163 gccgctgtcc tcccgacgt ggcggccgag cgcctcgacc tcggcgcggt gctcgccgag 3720
165 ccagcccgc agcccgcga gcccgccga cgcgccgagc acggcgcgga ggcccacggc 3780
167 cgcgagcag gcgagcttc ccgcccactc gaacgcgag gccgcgcga ggccgtctc 3840
169 gcgcccctgc tcggccgag gcggggcgcc gaagaaggcc gtgaagagc cgagcagcg 3900
171 gcagaagagc tcgcccacg cctcctcggt ccccgcccc gagagcacgc gcaccgactg 3960
173 cacggtcgcg cggaaactgt gcgcgacgta gggcaggctc gccacgagc cgaaggcgcc 4020

```

## RAW SEQUENCE LISTING

DATE: 10/22/2004

PATENT APPLICATION: US/10/729,802

TIME: 15:42:31

Input Set : A:\Seq List.txt

Output Set: N:\CRF4\10222004\J729802.raw

175	gacgagcgcc	ccggcgccgg	ggctctggaa	gcggaacgcg	agcaggtcgg	tgagcgacga	4080
177	gagggcgctgc	tcgcgcgtag	tgcgcagcac	gcgcgcccag	aggagcgggc	tgcccatgca	4140
179	cgcgagcgtc	gggcccaggt	acacagcgag	gaagacgagc	ccgtggcgct	gcgcgaagcc	4200
181	gacgcccgcg	tagtacgtcc	acgacgaggg	gtagacggcg	agcgagaggg	cgagcacgag	4260
183	cgggctccgc	gcgagcgcg	gcgggcgcgc	ggcgcgctgc	gcggcgagcg	cgatcgcggc	4320
185	gagcacgccc	agccacgcca	ccgtggcgaa	caggaggacg	cccacgtcga	tcacggcggc	4380
187	ggctcccgt	gcgcgccc	ggcgcgccc	cggtcgggcg	gcgtcgcgag	cgcgcgagc	4440
189	gcgatcagcg	cgagccacac	cgcaagacg	gcccgcaccg	cgagcgggcc	gcgggcccag	4500
191	agcaagcgcg	ccggcgacac	gaggaggacc	gcgcccagca	gcacgagcac	gagcgcgca	4560
193	tccgcccgcg	cgccctctgc	gtcgcgctct	ccgcccagtg	gcagaggcta	ctcagggccg	4620
195	ccgcggtgta	atacgtgagg	acgattgacg	caatgcgtta	ttgtggtctc	aatcgagcc	4680
197	gcggatcggc	ggggcgggat	ctgcgcggga	tgggcagccg	cgagccgccc	atccgcctct	4740
199	tccgcccgcg	gcgcgagcgc	gggtgagcgc	gcgcgatcac	ccgcgctcgg	ccgcgatcgt	4800
201	ggcgagcatg	tcgcgcgca	gcgcgcgca	tcacccgctc	tcggcccgca	tcttctcgag	4860
203	gtgactgcgc	gcgtgctcga	tcacggcctc	ggtgcccag	tcgatcccc	acttcgccc	4920
205	gagcgcgggc	cacgcccgc	agcgctcggc	ggcggtgggc	gcgagggccg	gccatgccc	4980
207	accgcccgc	gcctcgaagc	gcgcgatgac	cgcgctcagc	accgccttgc	cgaaggcgcc	5040
209	ggcgaagagc	gcgaagtcgc	tcgagggatc	gccgacgtgg	gcctcggtcc	agtcgaggat	5100
211	ccccgtcagg	cggcgctcct	cgcgcacgag	catgtgccc	gggtggagg	cgccgtgcac	5160
213	cagggcgacg	ggggcgggc	agcgcgcgct	gtccgcgagc	cagcgctgcc	accgcgccc	5220
215	cacggcctcg	ggggcgagga	gcgtcgagcg	cgtctcgctc	atggcccgcg	cgagggtcgc	5280
217	ccgctcgctc	tcgatggact	tcacggggac	gcccggcgcc	tcgatcgccg	cgcgctcgat	5340
219	gcgctcgagc	gcccgcgagg	cgctccgccat	cgagtcgatg	aacgcggccg	gcggcgccgc	5400
221	gggatcgacg	tgattccagc	ggacgcccgc	ctcgggatcg	aaggacaccg	ccgggacgtc	5460
223	gcccagccgc	ggataggcga	tcacctgggtc	ggtgtgcacg	cgccagtcgg	gcacggccac	5520
225	gggcaggtgc	ttgcgcacga	gggccaagac	gcgcgcctcg	acgcgggccc	ccttcaccac	5580
227	cgcgagccgg	cgcggggtgc	gcacgaccca	cgggacgccc	tcctcgtcgc	gggcgtgcac	5640
229	gacgaggaag	tcgagcccgc	tctggctcga	gtcggcgccg	ggcgcgacga	tcgggagccc	5700
231	ctcgcgccgc	gcggcgctcga	ggagcgcgcc	gggggagtcg	agcggcgcga	agtcggagga	5760
233	ggcggtggag	gaagcggtgg	acgagagctc	gtgatgttcg	gtcatgatcg	cggtcctctt	5820
235	cgcgcgcccg	cggcagggcg	gcgcgcgtgg	aaaggggaag	actcgcgccg	cgagctcacg	5880
237	accgatcagg	cgtgcatggc	gtgcatcctc	caggctgccc	ggcgtagtc	gacgcgcccc	5940
239	gcgtcttcca	cgtgctgacg	gaagacaggg	cacggacagg	cacccgcgcg	ctcgccgcgc	6000
241	cgccccggcg	gtgccgggga	ggcggggagg	acgaggatgc	cgggctcagc	gcagccggag	6060
243	aaatgccatg	gcccagaggt	ctcacgcggc	gtcccgcgcc	gcaaccctct	tcgcgcgcgt	6120
245	ggcgcgccgg	cccgcggtga	tagcatcgcc	cgcattgggca	tcgatgagga	gctggcagag	6180
247	cagcgcatcg	gtacgcggat	cgcccgtgg	tcggtgagc	gcgtgctcgg	ggtcggcggg	6240
249	atggcgagcg	tctactactg	ccgcgcgcgac	gacgggtgcg	tgccggcggt	caagctcctg	6300
251	caccccgagc	tcgccagcat	cgaggaggtg	cggaagcggt	tcttgcgcga	ggggccgata	6360
253	ggcagcgcg	tcgcccgcgt	ggcgccgctc	tcgagggggc	tgccgcaggt	gatcgaggcg	6420
255	ggggaagcgg	acggcgcgcc	ctacatggcc	atggagatgc	tcgaggggga	gacggtcttc	6480
257	gatcgcatgg	tcgggcacgg	gacgctccc	gtcggccagg	tgatcgcgct	cgccgagcgg	6540
259	gtgctcgacg	tgctggacgt	ggcgacgcgc	cacggcatcg	tcacccgcga	cctcaagccc	6600
261	gagaacctgc	acatcgga	cgacgggcgc	gtgcgcgtgc	tcgatttcgg	cctcgcgccg	6660
263	gtcctcgatc	cgctgctcga	ggacgtcgcc	ggcggtcgcc	agatgacgaa	gaccagcag	6720
265	ggcggtgcga	tcggcaccga	cgattacatc	gccccgagc	aggccctggg	cctcatccgg	6780
267	gagatcgacg	cgcggacaga	cctgttcggg	ctgggagcca	cgatgttcgg	cctgctcgcg	6840
269	ggcgcgacga	tcacgggcaa	cctggaggac	gcgcacctgc	tcacgcgcgc	cgccacggag	6900
271	aaggcgccgc	cgctcgcgca	gcacgcccc	gcccgcgcgc	ccggcctgtg	cgccgctcgc	6960

## RAW SEQUENCE LISTING

DATE: 10/22/2004

PATENT APPLICATION: US/10/729,802

TIME: 15:42:31

Input Set : A:\Seq List.txt

Output Set: N:\CRF4\10222004\J729802.raw

273	gaccgcgccc	tcgccttctc	caagcaggag	cgctaccccg	acgcgcggac	gatgcgcgcg	7020
275	gacctgcgcg	ccgtgcgcgc	gggcccgcgag	ccgcgcgtatg	cgacggccgc	ggcgcggggg	7080
277	cgggcctagc	gcgcgcggagt	cctcggcggc	ggaggcgggc	cgccctcgtc	ccgaggcggc	7140
279	tcgggtccgc	tcgggcgcgga	gagggcggcg	ggaggcgggc	ggctctcgca	ccccgcggg	7200
281	ctgcgcgagc	ggctcagtg	tccacgcctc	gaacgcgcgc	gttccataac	gccgtctggc	7260
283	gttccgctgg	gtgcggtcgc	atgctccagc	cgtggatcca	ggcgtggcgc	catcgccgcg	7320
285	gcgtccatcc	tcgcgcgtgac	ccgcgcccat	gcggcgagc	cgccatcgac	gatgtcaggc	7380
287	tccgaggatc	cggatccgga	gctcgacggc	tgcgcgcgcg	gtgttgccct	cgtgcgcggg	7440
289	ccgttacggc	gcgcgcacag	gggcgatctc	gtcggccatg	cgacaaacag	gtgacgggat	7500
291	gagctgacac	ccgcagaaa	ccggctcgaa	acacgcccc	ccaaaactcc	ccccgaaaac	7560
293	aactacatct	gtcaccgagc	gtccgggcct	catcgacgca	acaaatatca	cgtttcggac	7620
295	tggaccagca	agcccgcata	cgtcattgac	agaatgtgga	ctccccctat	catatcgctc	7680
297	caatcgcccg	gccgagctga	agacagcggc	gcagcggggc	cattgagcaa	cagcccatcc	7740
299	aggtgaacga	gcggagaccc	gcgtccgaga	cgcgcgcgact	cgccgcgatgt	ggacagctcg	7800
301	gggtggcggt	cagccgcctg	ccgtctccaa	ggacgggtccg	ctgaacagat	gccgcgcgct	7860
303	gcgtgtgga	taacggggcg	gcgcgacgct	ggagcgcctt	caccgatcga	agaggaagcc	7920
305	ccgccgaaaa	gagttcgaaa	aaaatgaagg	atcgctcccc	cgagcggcat	ctacccgccc	7980
307	gcggcgcccg	gatctcggcg	tcgggcgac	gcttttgtgc	gtagggtcga	ggtgcgcccc	8040
309	tgcgtgtca	gccattgaca	tgcgtgggcg	ctgcctctgg	tccgctcgtc	atggcctgct	8100
311	ggctgccgtg	cagcggcgga	cttgcattgga	gaggatgatt	ggaaatcgaa	ggtccagtg	8160
313	agcaggagcg	cattgcgac	atcggcgtag	cgtgcgcgatt	tcccggtct	ccggactatg	8220
315	gccggtactg	gcagctgctc	gagcggggcg	agcatgccat	cctcgagatc	ccaccggcc	8280
317	ggtgggatcc	ccggggcccat	tattcccctg	acttcaataa	gcctggcaag	agcatcagca	8340
319	agtgggtgcg	gctgatagac	gacatcgcca	gcttcgacca	ccgcttcttc	aacgtgtcgg	8400
321	agcgcgaggc	gaagagcatg	gaccctcagc	agcgcctgct	cctggaagag	gcattggcgt	8460
323	gcacgcagga	ctccggcggtg	ccgctcgagc	agctccgcgc	ccggaagacg	tccatctacg	8520
325	tgggcttcat	ggcgacggat	taccaccagg	agtccgcggc	cccgggccgc	ccggtcgaca	8580
327	gctacgcgcg	cctggggagc	tacggctcca	tcctggccaa	ccgcgtctcc	tatacgtctg	8640
329	ggctgcgcgg	cgcgagcatc	gccatcgacg	ccgcctgcgc	ctctccctc	gtcgcgctcc	8700
331	acgaggccag	gcgcgctctc	cagcgagggtg	aaagcgaatt	tgcgctcgcc	gccggcggtg	8760
333	gcctcaactt	tcattccttg	aagtacgtct	ccttctccaa	gtcgcgcgatg	ctcagcccg	8820
335	acgggctgtg	caagacgttc	gacgcggagc	cgaacggcta	cgtccccgga	gacgggggtg	8880
337	gtgtcctctt	gctgcacccc	ctggccaagg	ccatcgctgc	gggatgccac	gtctacggcg	8940
339	tgcgcgcggg	ctccgcggtc	aaccacaccc	gcaccgcgcg	ttccatcacc	gcgcgcgcgcg	9000
341	tcgcgcgcca	gcgggacgtc	atcctcgagg	cctacgagga	cgcgggctgg	aaccgcgaga	9060
343	cgggtgacgta	cgtggaggcc	catggcaccg	gcacctcgct	gggggacccc	atcgagggtg	9120
345	aagcgtgac	ccaggcgctc	cgccgctaca	cgaccgcgcg	ccagcgtgc	gcgatcgggt	9180
347	cggtgaaatc	gaacatcggc	cacctcgagg	cagccgcggg	cgtcgctggg	gtcatcaagg	9240
349	tgctcatgat	gctgaagcac	cgcgtgatcc	cgcggacgct	gcattgtccag	acgtcaacc	9300
351	cgctcatccg	cttcgaggag	acgcccttcg	tggctgccac	ccgcgccatg	gaatggcgcg	9360
353	cgggaaggagg	cgagcccctg	cgcgcagggg	tgagctcggt	cggcttcggg	ggcgccaaacg	9420
355	cccacgtcct	gatatccgag	cacggcgggc	cgcgcgcgca	gccccgccc	cgaggcgagc	9480
357	tccgcggccc	ccgcggcgca	gccccgcggg	gcgagacggc	ggcgctcca	gcggaggacg	9540
359	gcccgcgtgg	ccgcgcggag	gagctccctt	cgcagcagga	ggacgcgcg	gcggacgagc	9600
361	gcgaaggcac	cgtcttctc	ctctccgcca	ggtccgcgct	gagcctgtcc	agggccgtcc	9660
363	gacgctggga	ggccttcgct	gacgatcccc	tgcgtgaaggc	aggcctggcc	acctcgctcc	9720
365	gcgatattcg	gcgcaccctg	gccgcgggac	gcgaaagctt	cgagcaccgc	cacggcttct	9780
367	acatcgacga	cgagcgagac	ctccggcgct	tgctcaagga	accgcggcg	cgccctggaga	9840
369	agacccgacc	tcctcgctgg	gtgacgcggt	tcggcgcgct	cgccctcggg	cagggcaggc	9900

## RAW SEQUENCE LISTING

DATE: 10/22/2004

PATENT APPLICATION: US/10/729,802

TIME: 15:42:31

Input Set : A:\Seq List.txt

Output Set: N:\CRF4\10222004\J729802.raw

```

371 ccgccgtccg tctgctcggc ggcgcgcgcc tgctcgatcc tcaccttgac cgcattccgga 9960
373 ggtgcctcga ggagctgggg atcgagcacc aggatctccg gacgtaccgt caggacggcg 10020
375 atcccgggcg ccaggagctg cccatagcgt tccctcttcgc tcacgcgtac gtctcggcgc 10080
377 tcgcggaccc cggcttcacg ccgtacgcga ccagcggaga gggtcacggc atctggttgg 10140
379 cgtcgcccca gagcgggggc ttgcgcgtga acgagatcgt gtcgggtgctc tcggggggcgg 10200
381 gagagctcca gaggtctctg ccccggcgtc ccaggctgcc gctcttcgat cccatccatt 10260
383 ccacctacct gatgccgtac ctccgtggacg cgggctacgt ccgcgcgctc gtggaggggc 10320
385 tggcgggttc ggcagcgacg ctccgtgacc tccctcgagag ggctcgactc ctgctccgcg 10380
387 cgcagttcac cttcaagaag ttccgtgagcg agtggtcgcc ggccttgacg gccctgggca 10440
389 cgacgcctga gcgcctgctc gaggaggagc tccccgcgtc cgacgctcgc gcctcgctga 10500
391 tcgcgctcat cgcgcagagc tgcgtgcgca agctgaaccg cagggtggcag ctacaggacg 10560
393 cgccctcctc gggagatccg cggttcgacg agctcgctga cctgggtggtc gacgggctcc 10620
395 tgccgcgcga ggcgctcgtg cagctcgccc tcggcgatcg ggcggacctc cacgagatcg 10680
397 ccggcaccct gcaccggcgt caggacctgc tcgatctcag ccagccgtac ggcattcctgc 10740
399 ggaggcgagc cgagcgccctg gacccgagcg agatcgacga tttttccggc tggatccggc 10800
401 agatcgcggg cctcgaagcg ccgggcctgc cgcccgaaga gggcgtcgcg ttccctggagc 10860
403 tcggcagggt ggcgaggcgc ggcagcgggg cgccggggcc agatctgagc gtcccagcgc 10920
405 tggacagccc gctgcagctc gtcgcgctgc gcctgtggct ggaggggact gacatccggg 10980
407 ggggagagct ctttcgggag gggagcttcg cgaagatccc gctgcctggc tatgcgttcg 11040
409 atcaggcgca gttctggctg ccggcagcca gagaaggcac gtccctccc gaggaagcgc 11100
411 gcgagcgagc ggcgcgcga cagccgcgcg tcgcgcgcga cggcgcggcg gaccgggctg 11160
413 aacgccccct gatccccgtg gaccgcctga tcgcgcgata cgtcatccag ggccgcgcca 11220
415 tcgtgcccgg cgccctcatg gtcgagatgg cccctggaggc gtcacagcgc gcccacgggc 11280
417 ggccggcggc ggtcctgaga gacatcgtgt tccagcgggc agttccgctc gacgcgcacg 11340
419 cgaacctcac gatcgatgtc gaccctgacg gcgggcgttt cgtggggaga gacggcgcg 11400
421 agggggcatg ccgtggagcc tacgggagcg cgccccctc tcgctggag cccctcgatg 11460
423 cgccggcccg cgacggcgac cgccgcgcgc acgatagcct ctaccgcgac ctttcgcgcg 11520
425 tcgggtaccg ctacggcgag agcctgcagg tgatcgccgc gaccggtcgg gtcggctcgc 11580
427 gccatgtgtt cgagctccgc tccagcgctc ctgcacgac gctgtcgcg ggcttcgacc 11640
429 cagcgctctt cgacgggctg ctccaggcg cgctggctgt ggggcagcgc ctccggctgt 11700
431 tcggcgaggc cggcgcgac tatgtgcctc aagccatcgc gctcgtcgag cggtcgcctc 11760
433 cgggtggacg gggctgcctg gtctgcatcg acgagcgca tctctcgatc aaggagtacg 11820
435 gcctgaccgt cgacctgcgc gcctacgatc cgtcgggggc cggcctgctc cgggtagagg 11880
437 gcatcttctt tcgaaagggt ctgcgggct tcgtcgagag ctccctgcc agggtgaccg 11940
439 gcggcgccgc ggaggcgcca cgccgcgcgc gacggccgg agatcccag tcggccgcgc 12000
441 cgcgagcagc gtgctatcag cccgtctgg agcgacggcc gctccggat cgcggcgggg 12060
443 caccgcccgc tggctcgcg gtggcgatca tccgctccga ggcggactcc gcagcctggc 12120
445 tctcgccctt gcgagcgcg tattcacagg tcacgggtgc gcgcctcggc agcccgccgg 12180
447 gtgaggcggg cgaagatcgg ctgctcctgg gcgacgatcg agaggagggc ttctccgagc 12240
449 tgggtgcgcg ggcggagaga ggcggccgcg gcgaggcgt cgacatctac ctccctggacg 12300
451 cgctgacgcc cgacgcccgc gtccctcgc gcgcgcctgc ggcgctcgag ccggcgctgg 12360
453 gccccgcga agaggccgcg gcgcgcagcg cgttcctgct ggccaaggcc ctggtgaaga 12420
455 gcgcggcgcc gtggcgccctg gtcacgga cgcgcgctc ccaggccgtc gtgcccggag 12480
457 accggggcga agggttccgc cacggggtgc tcgccggcat ggcccggacc ctgacgcagg 12540
459 agaaccgcgc ggttcaggct cacctggtgg atttcgacgc cgctcctcca ctgcgatgcg 12600
461 ccggccacct cgtcgaggag tgcgggtgtc tcggccggg ggaactgggtg gcctaccgcg 12660
463 acggcgcccg ttacgtccgc gcctttgcgc cggctcgagga gcccggcgcg acggccacgc 12720
465 cgccgttcca ggacggtcgc gtctatctgc tggctcgggtg cgccggcggg ctccggcctcg 12780
467 gcctcgcggg gcacatcgcc tcccgggcgc atgcgcgcct ggtcctgctc ggccgctctc 12840

```

RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 10/22/2004  
PATENT APPLICATION:    US/10/729,802      TIME: 15:42:32

Input Set : A:\Seq List.txt  
Output Set: N:\CRF4\10222004\J729802.raw

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,  
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

eq#:2,3,4,5,6,7,8,9

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/729,802

DATE: 10/22/2004

TIME: 15:42:32

Input Set : A:\Seq List.txt

Output Set: N:\CRF4\10222004\J729802.raw